

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 4. This sheet, which includes Figs. 4 and 5, replaces the original sheet including Figs. 4 and 5. In Fig. 4 the “?” has been removed as there is no apparent reason for its presence and it appears to be an error. No other change has been made to Fig. 4 and no change to Fig. 5. This Replacement Sheet is respectfully requested to be entered.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

Remarks/Arguments

Election/Restriction

Elected Group II, claims 12-32 directed to phosphine as the linking group; core CdSe/Cd (now claimed in the present revised claims). New claims 38-40 are supported by Example 21, which is the elected species.

Applicant reserve their right to file a divisional application(s) on restricted and withdrawn Group I, claims 1-11 and Group III, claims 33-36, if these claims are not rejoined.

Priority/Specification

US Provisional 60/488909 has been stated by the Examiner as not sufficient for phosphine or phosphine oxide priority. Applicants have amended the specification to remove that statement from the first paragraph after the title.

Information Disclosure Statement

The IDS submitted on January 20, 2006 lists many US patents and published applications. As the Examiner has access to these references, no copy is required to be provided.

A copy of WO 2004/031732 and WO 2000/46839 are now enclosed that were also listed on the IDS submitted January 20, 2006. As these are not newly cited references, Applicants believe that is no need for an IDS form. If there is any fee for this submission, please charge our Deposit Account listed on page 1 of this paper.

KR 2002-072671 is filed and issued in Korean. Applicants have not yet found a counterpart application in English. However, a copy of the Abstract in English is enclosed.

Applicants request that these references be made of record.

Drawings

A revised Fig 4 is provided to remove the “?” which appears below a compound. There is no apparent reason for the “?” such that it appears to be a

typographical error. Therefore, the “?” has been removed on the Replacement Sheet. That change is the only amendment to Fig. 4. Although Fig. 5 is on the same sheet it has not been amended.

Claims

Rejoinder of the claims of Groups I and III is requested, when appropriate, as the scope of these claims is coextensive with Group II claims. Applicants have amended these claims to maintain this relationship such that rejoinder is possible. If such rejoinder is not done, then Applicants reserve their right to file divisional application(s) to the prior restricted claims of Groups I and III.

Claims 12-32 are pending after the restriction mailed July 21, 2009 that required further restriction of a Group III.

The above withdrawn claims have been amended to permit rejoinder. Also various errors in claims 3-9, 14-32 regarding the proper reference to prior claims is corrected above; namely, the “A” has been amended to “The” when the claim is dependent on a prior claim. Claims 10 has been incorporated into claim 1. Claim 11 has been incorporated into claim 2. Claims 10 and 11 are canceled.

Also an error in claim 13 regarding the proper reference to prior claims is corrected above; namely, the “A” has been amended to “The” when the claim is dependent on a prior claim.

Claims 13 and 14 have their substance added to claim 12, but are retained.

Claims 1, 2 and 12 have added the property of without quenching the photoluminescence so that it is present in the independent claims.

New claims 38-40 are added to specifically claim the elected species and are supported by Example 21.

Applicants respectfully request that these claim amendments now be entered. A Fee Sheet for the charge for these claim amendments is enclosed.

Rejections

Claims 12 & 32: 102 (a or e) – Peng *et al.* (US 2004/0101976)

Peng was filed May 13, 2002 with a claim to priority to a US Provisional Application filed May 14, 2001 (now US Patent 7,153,703). Thus both dates are prior to the present invention filing dates.

With regard to the citation of Peng *et al.* (US 2004/0101976), there is no mention of a CdSe/Cd core shell nanoparticle core of the elected species. There is no mention of phosphine as a linking group as now described by the formula in the amended claims. The Peng groups are phosphine oxide (not of the present formula) or phosphonic acid groups as is apparent in their paragraph [0062], neither of which groups are phosphine groups as shown by the structure in present Claims 12 and 13. It is well known that these different phosphorous groups are very different structurally and in their chemical behavior. The present formulae have ethylene oxide units required between the dendron and the phosphine group. Peng does not discuss any of these formulae possibilities.

Peng has no method to make these compounds because he only made the thiols and states that synthesis will not work. Thus Peng has not disclosed the present compounds or any way to obtain them. Thus the elected linker and structures as now limited in the claims are **not** disclosed in Peng.

Also Peng discussed only the possibility of use as a semiconductor. Peng taught about a nanocrystal attached with organic dendron. One side (focal point) was attached to the nanocrystals binding site (NBS) and the other side of the dendron ended with active sites. Peng's dendron was vaguely defined. The present structures are not taught.

Applicants believe that the term “fragrance” should be defined by the American Heritage Dictionary:

fra·grance  (frā'grəns)

n.

1. The state or quality of having a pleasant odor.
2. A sweet or pleasant odor; a scent.
3. A substance, such as a perfume or cologne, designed to emit a pleasant odor.

Synonyms: fragrance, aroma, bouquet, perfume, redolence, scent

These nouns denote a pleasant or sweet odor: *the fragrance of lilacs; the aroma of sizzling*

bacon; the bouquet of a fine wine; the perfume of roses; the redolence of fresh coffee; the scent of newly mown hay.

The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000 by Houghton Mifflin Company. Updated in 2009. Published by Houghton Mifflin Company. All rights reserved.

Therefore ammonia, although having an odor, it is not sweet or pleasant and would not be considered a fragrance. Thus Peng has not shown any utility for the presently claimed compounds.

In contrast, this invention demonstrates a sophisticated system with clearly defined components, *e.g.*, in the elected species of ethylene oxide, benzoic acid, phosphine of the structure given with at least one aryl group. Applicants believe that the specific formulae now in the amended claims distinguish over Peng. Also because Peng has no proof of utility or way taught to make any of his vague compounds [0062] this reference is not enabling for one skilled in the art to derive the present invention.

Rejections

Claims 12, 13, 27 & 32: 102 (b) – Vossmeier *et al.* (US 2003/0109056)

Vossmeier was filed July 18, 2002 with a claim to priority to an EP Application filed July 19, 2001 (now US Patent 7,253,004). Thus both dates are prior to the present invention filing dates.

Vossmeier describes dendrimers – depicted as spheres – in their Figs. Significantly, the present invention is directed to dendrons. These are different dendritic molecules. A dendron is a portion of a dendrimer having a focal point (shown in the present specification by Figs. 7, 8, 9 and 18 as a wedge shape). A dendrimer (sphere) has no focal point for any metal particle to attach and, for example form a quantum dot, as described by the present invention. Thus the dendrimer is a complete molecule usually having a void volume and may have active surface groups, but it has no reactive focal point to attach to a metal. A dendron is a portion of the dendrimer having a focal point that can be reactive to make a quantum dot, for example.

As Vossmeier was filed 2 months after Peng, if there was similarity of these compounds between Peng and Vossmeier, an interference should have been declared. Thus these molecules were not believed the same by those Examiners.

Applicants respectfully request that this citation be removed as not relevant to this invention.

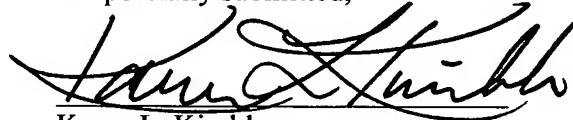
SUMMARY

Applicants believe that they have responded to all items in this Action and respectfully request the allowance of these amended claims.

If any fees are required for the claim amendments (believed to be 1 dependent claim for \$26) and the submission of the references, please charge the Deposit Account listed on page 1 of this paper.

However, if the Examiner has any questions concerning this Response, please contact the undersigned. If there are still unresolved issues, Applicants respectfully request that the Examiner contact the undersigned to expedite allowance of the claims.

Respectfully submitted,



Karen L. Kimble
Registration No. 26,995
Phone: (989) 687-7401
Fax: (989) 687-7403
Email: techlaw@tm.net

Technology Law, PLLC
3595 N. Sunset Way
Sanford, MI 48657

Enclosures

- Transmittal Letter
- Replacement Sheet for Fig 4
- Annotated Sheet Showing Changes to Fig 4
- WO 2004/031732
- WO 2000/46839
- Post Card

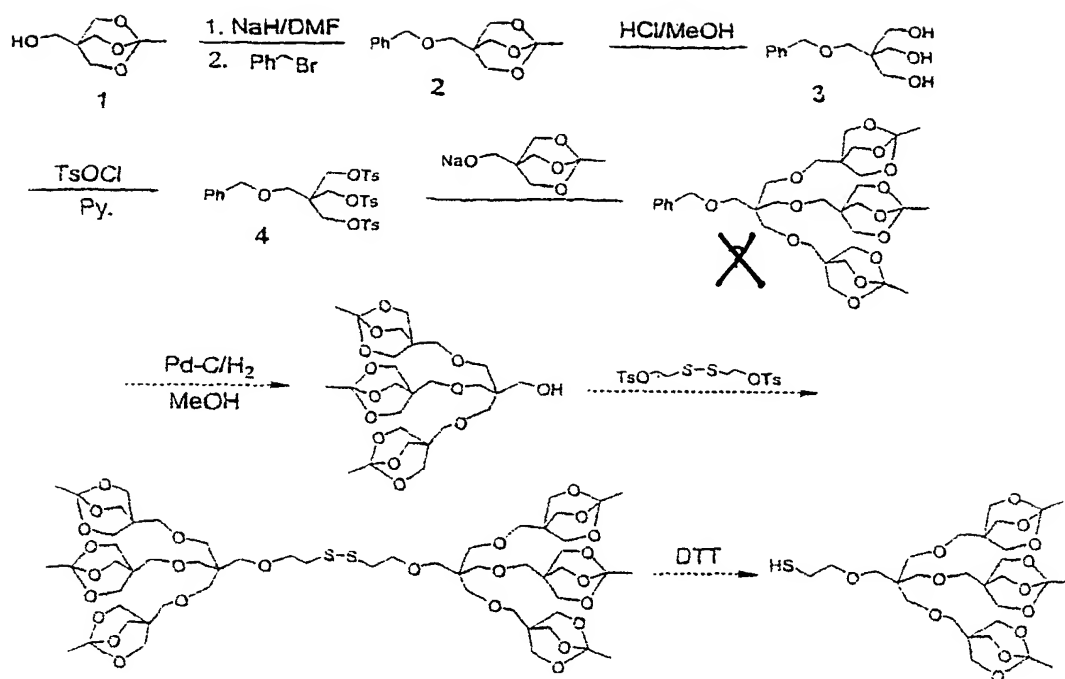


FIG 4

